

WHAT IS CLAIMED IS:

1. A signal processing apparatus for processing an acoustic signal reproduced together with an image signal, the signal processing apparatus comprising:

a memory for storing a plurality of filter coefficients for correcting the acoustic signal;

a filter coefficient selection section for receiving a correction command, from outside the signal processing apparatus, for specifying a correction method for the acoustic signal and selecting at least one of the plurality of filter coefficients stored in the memory based on the correction command; and

a correction section for correcting the acoustic signal using the at least one filter coefficient selected by the filter coefficient selection section.

2. A signal processing apparatus according to claim 1, wherein the correction command is input to the signal processing apparatus by receiving of a broadcast signal or a communication signal.

3. A signal processing apparatus according to claim 1, wherein the correction command is recorded on a recording medium and is input to the signal processing apparatus by reproduction of the recording medium.

4. A signal processing apparatus according to claim 1, wherein the memory is arranged so as to receive at least one filter coefficient for correcting the acoustic signal from outside the signal processing apparatus, and to add the at least one filter coefficient received to the plurality

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of filter coefficients stored in the memory or to replace at least one of the plurality of filter coefficients stored in the memory with the at least one filter coefficient received.

5. A signal processing apparatus according to claim 4, wherein the at least one filter coefficient received is recorded on a recording medium and is input to the signal processing apparatus by reproduction of the recording medium.

6. A signal processing apparatus according to claim 5, further comprising a buffer memory for temporarily accumulating the image signal and the acoustic signal, wherein:

a speed at which the image signal and the acoustic signal are input to the buffer memory is higher than a speed at which the image signal and the acoustic signal are output from the buffer memory,

the at least one filter coefficient recorded on the recording medium is stored in the memory while the image signal and the acoustic signal are output from the buffer memory, and

a time period required for the image signal and the acoustic signal to be output from the buffer memory is equal to or longer than a time period for the at least one filter coefficient to be stored in the memory.

7. A signal processing apparatus according to claim 1, wherein:

the at least one filter coefficient selected includes at least one filter coefficient representing a transfer function showing an acoustic characteristic of a

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direct sound from a sound source to a viewer/listener, and
the correction section includes a transfer function
correction circuit for correcting a transfer function of
the acoustic signal in accordance with the at least one
filter coefficient representing the transfer function.

8. A signal processing apparatus according to claim 1,
wherein:

the at least one filter coefficient selected
includes at least one filter coefficient representing a
transfer function showing an acoustic characteristic of a
direct sound from a sound source to a viewer/listener and
at least one filter coefficient representing a reflection
structure showing an acoustic characteristic of a
reflection from the sound source to the viewer/listener,
and

the correction section includes:

a transfer function correction circuit for
correcting the transfer function of the acoustic signal in
accordance with the at least one filter coefficient
representing the transfer function,

a reflection addition circuit for adding a
reflection to the acoustic signal in accordance with the
at least one filter coefficient representing the reflection
structure, and

an adder for adding an output from the transfer
function correction circuit and an output from the
reflection addition circuit.

9. A signal processing apparatus according to claim 1,
wherein:

the at least one filter coefficient selected
includes at least one filter coefficient representing a

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transfer function showing an acoustic characteristic of a direct sound from a sound source to a viewer/listener and at least one filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection from the sound source to the viewer/listener, and

the correction section includes:

a transfer function correction circuit for correcting the transfer function of the acoustic signal in accordance with the at least one filter coefficient representing the transfer function, and

a reflection addition circuit for adding a reflection to an output of the transfer function correction circuit in accordance with the at least one filter coefficient representing the reflection structure.

10. A signal processing apparatus according to claim 1, wherein the filter coefficient selection section includes:

an automatic selection section for automatically selecting at least one of the plurality of filter coefficients stored in the memory based on the correction command, and

a manual selection section for manually selecting at least one of the plurality of filter coefficients stored in the memory.

11. A signal processing apparatus according to claim 8, wherein the at least one filter coefficient representing the reflection structure includes:

a first filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection from the sound source to the viewer/listener when a distance between the sound source and the

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viewer/listener is a first distance, and

a second filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection from the sound source to the viewer/listener when the distance between the sound source and the viewer/listener is a second distance which is different from the first distance.

12. A signal processing apparatus according to claim 9, wherein the at least one filter coefficient representing the reflection structure includes:

a first filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection from the sound source to the viewer/listener when a distance between the sound source and the viewer/listener is a first distance, and

a second filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection from the sound source to the viewer/listener when the distance between the sound source and the viewer/listener is a second distance which is different from the first distance.

13. A signal processing apparatus according to claim 8, wherein the at least one filter coefficient representing the reflection structure includes a third filter coefficient representing a reflection structure showing an acoustic characteristic of a reflection reaching the viewer/listener from a direction in a predetermined range.

14. A signal processing apparatus according to claim 9, wherein the at least one filter coefficient representing the reflection structure includes a third filter

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coefficient representing a reflection structure showing an acoustic characteristic of a reflection reaching the viewer/listener from a direction in a predetermined range.

15. A signal processing apparatus according to claim 13, wherein the predetermined range is defined by a first straight line connecting the sound source and a center of a head of the viewer/listener and a second straight line extending from the center of the head of the viewer/listener at an angle of 15 degrees or less from the first straight line.

16. A signal processing apparatus according to claim 14, wherein the predetermined range is defined by a first straight line connecting the sound source and a center of a head of the viewer/listener and a second straight line extending from the center of the head of the viewer/listener at an angle of 15 degrees or less from the first straight line.

17. A signal processing apparatus according to claim 1, wherein the acoustic signal includes multiple-channel acoustic signals, and the filter coefficient selection section selects a filter coefficient corresponding to each of the multiple-channel acoustic signals.

18. A signal processing apparatus according to claim 1, further comprising a display section for displaying a distance between a sound source and a viewer/listener.

19. A recording medium, comprising:

an acoustic data area for storing an acoustic signal;

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an image data area for storing an image signal;
a navigation data area for storing navigation data showing locations of the acoustic data area and the image data area; and

an assisting data area for storing assisting data, wherein:

acoustic signal correction data is stored in at least one of the acoustic data area, the image data area, the navigation data area, and the assisting data area, and

the acoustic signal correction data includes at least one of a correction command for specifying a correction method for the acoustic signal and a filter coefficient for correcting the acoustic signal.

20. A recording medium according to claim 19, wherein the correction command is stored in at least one of the acoustic data area, the image data area, and the navigation data area, and the filter coefficient is stored in the assisting data area.

21. A recording medium according to claim 19, wherein the image data area stores at least one image pack, and the image pack includes the image signal and the acoustic signal correction data.

22. A recording medium according to claim 19, wherein the acoustic data area stores at least one acoustic pack, and the acoustic pack includes the acoustic signal and the acoustic signal correction data.

23. A recording medium according to claim 19, wherein the navigation data area stores at least one navigation pack, and the navigation pack includes the navigation data and

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the acoustic signal correction data.

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